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Range: from to Features: SNP CDD MGC HPRD STS tRN

BLINK, Conserved Domains, NIH cDNA clone, Links

Comment Features Sequence

LOCUS AAH95495 369 aa linear PRI 25-JUL-2005

DEFINITION Somatostatin receptor 2 [Homo sapiens].

ACCESSION AAH95495

VERSION AAH95495.1 GI:66267323

DBSOURCE accession BC095495.1

KEYWORDS MGC.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (residues 1 to 369)

AUTHORS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnurch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

CONSRTM Mammalian Gene Collection Program Team

TITLE Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

PUBMED 12477932

REFERENCE 2 (residues 1 to 369)

AUTHORS .

CONSRTM NIH MGC Project

TITLE Direct Submission

JOURNAL Submitted (06-MAY-2005) National Institutes of Health, Mammalian Gene Collection (MGC), Bethesda, MD 20892-2590, USA

REMARK NIH-MGC Project URL: <http://mgc.nci.nih.gov>
COMMENT
 Contact: MGC help desk
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: Dr. Michael Brownstein
 cDNA Library Preparation: Michael Brownstein / Ted Usdin
 Laboratory
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Sequencing Group at the Stanford Human Genome
 Center, Stanford University School of Medicine, Stanford, CA 94305
 Web site: <http://www-shgc.stanford.edu>
 Contact: (Dickson, Mark) mcde@paxil.stanford.edu
 Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers,
 R. M.

Clone distribution: MGC clone distribution information can be found
 through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>
 Series: IRAK Plate: 219 Row: a Column: 24
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 Method: conceptual translation.

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Range: from to Features: SNP CDD MGC HPRD STS tRN

1: AAH19610. Reports Somatostatin rece...[gi:18043109]

BLINK, Conserved

Domains, NIH

cDNA clone, Links

Comment Features Sequence

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 DEFINITION Somatostatin receptor 2 [Homo sapiens].
 ACCESSION AAH19610
 VERSION AAH19610.1 GI:18043109
 DBSOURCE accession BC019610.1
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 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 Hominidae; Homo.
 REFERENCE 1 (residues 1 to 369)
 AUTHORS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
 Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
 Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
 Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
 Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
 Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
 Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
 Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
 Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
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 Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
 Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
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 Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
 Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
 Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
 Schnurch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
 TITLE Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
 PUBMED 12477932
 REFERENCE 2 (residues 1 to 369)
 AUTHORS Strausberg, R.
 TITLE Direct Submission
 JOURNAL Submitted (19-DEC-2001) National Institutes of Health, Mammalian
 Gene Collection (MGC), Cancer Genomics Office, National Cancer
 Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
 USA

REMARK NIH-MGC Project URL: <http://mgc.nci.nih.gov>
COMMENT
 Contact: MGC help desk
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: ATCC
 cDNA Library Preparation: Life Technologies, Inc.
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Baylor College of Medicine Human Genome
 Sequencing Center
 Center code: BCM-HGSC
 Web site: <http://www.hgsc.bcm.tmc.edu/cdna/>
 Contact: amg@bcm.tmc.edu
 Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Loulseged, H.,
 Kowis, C.R., Sneed, A.J., Martin, R.G., Muzny, D.M., Nanavati,
 A.N., Gibbs, R.A.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>
 Series: IRAK Plate: 29 Row: a Column: 12
 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 4557858.
 Method: conceptual translation.

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 361 lndglqtsi

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Range: from to Features: SNP CDD MGC HPRD STS tRN

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BLink, Conserved Domains, Links

Comment Features Sequence

LOCUS NP_001041 369 aa linear PRI 18-DEC-2005
 DEFINITION somatostatin receptor 2 [Homo sapiens].
 ACCESSION NP_001041
 VERSION NP_001041.1 GI:4557859
 DBSOURCE REFSEQ: accession NM_001050.2
 KEYWORDS
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (residues 1 to 369)
 AUTHORS Csaba,Z., Pirker,S., Lelouvier,B., Simon,A., Videau,C.,
 Epelbaum,J., Czech,T., Baumgartner,C., Sperk,G. and Dournaud,P.
 TITLE Somatostatin receptor type 2 undergoes plastic changes in the human epileptic dentate gyrus
 JOURNAL J. Neuropathol. Exp. Neurol. 64 (11), 956-969 (2005)
 PUBMED 16254490
 REMARK GeneRIF: In the temporal lobe epilepsy, dentate gyrus, sst2 receptor mRNA expression was strongly increased in the granule cell layer, sst2 receptor-binding sites and immunoreactivity was preserved in the inner but decreased in the outer molecular layer.
 REFERENCE 2 (residues 1 to 369)
 AUTHORS Liu,A.M. and Wong,Y.H.
 TITLE Activation of nuclear factor κ B by somatostatin type 2 receptor in pancreatic acinar AR42J cells involves G α 14 and multiple signaling components: a mechanism requiring protein kinase C, calmodulin-dependent kinase II, ERK, and c-Src
 JOURNAL J. Biol. Chem. 280 (41), 34617-34625 (2005)
 PUBMED 16115892
 REMARK GeneRIF: activation of the IKK/NF κ B signaling cascade by SSTR2 requires a complicated network consisting of G α 14, protein kinase C, CamkII, ERK, and c-Src
 REFERENCE 3 (residues 1 to 369)
 AUTHORS Filopanti,M., Ronchi,C., Ballare,E., Bondioni,S., Lania,A.G., Losa,M., Gelmini,S., Peri,A., Orlando,C., Beck-Peccoz,P. and Spada,A.
 TITLE Analysis of somatostatin receptors 2 and 5 polymorphisms in patients with acromegaly
 JOURNAL J. Clin. Endocrinol. Metab. 90 (8), 4824-4828 (2005)
 PUBMED 15914528
 REMARK GeneRIF: SSTR2 and SSTR5 variants seem to have a minor role in

determining the responsiveness to somatostatin analogs in acromegaly
 4 (residues 1 to 369)
 Chen,L., Liu,Q., Qin,R., Le,H., Xia,R., Li,W. and Kumar,M.
 Amplification and functional characterization of MUC1 promoter and gene-virotherapy via a targeting adenoviral vector expressing hsSTR2 gene in MUC1-positive Panc-1 pancreatic cancer cells in vitro
 Int. J. Mol. Med. 15 (4), 617-626 (2005)
15754023
 REMARK GeneRIF: gene transfer into pancreatic neoplasm cells resulted in no apoptosis, but a significant cell proliferation inhibition

REFERENCE
 AUTHORS
 TITLE
 JOURNAL
 PUBMED
 REMARK

5 (residues 1 to 369)
 Grant,M., Collier,B. and Kumar,U.
 Agonist-dependent dissociation of human somatostatin receptor 2 dimers: a role in receptor trafficking
 J. Biol. Chem. 279 (35), 36179-36183 (2004)
15231824
 REMARK GeneRIF: human somatostatin receptor 2 dimers have a role in receptor trafficking

REFERENCE
 AUTHORS
 TITLE
 JOURNAL
 PUBMED
 REMARK

6 (residues 1 to 369)
 Kumar,M., Liu,Z.R., Thapa,L., Wang,D.Y., Tian,R. and Qin,R.Y.
 Mechanisms of inhibition of growth of human pancreatic carcinoma implanted in nude mice by somatostatin receptor subtype 2
 Pancreas 29 (2), 141-151 (2004)
15257106
 REMARK GeneRIF: Expression of the SSTR2 gene in pancreatic adenocarcinoma cells induces apoptosis, which may be mediated via down-regulation of Bcl-2 & up-regulation of Bax (alteration of Bcl-2/Bax ratio) & inhibits tumor angiogenesis, inhibiting of tumor growth.

REFERENCE
 AUTHORS
 TITLE
 JOURNAL
 PUBMED
 REMARK

7 (residues 1 to 369)
 Gugger,M., Waser,B., Kappeler,A., Schonbrunn,A. and Reubi,J.C.
 Immunohistochemical localization of somatostatin receptor sst2A in human gut and lung tissue: possible implications for physiology and carcinogenesis
 Ann. N. Y. Acad. Sci. 1014, 132-136 (2004)
15153427
 REMARK GeneRIF: Epithelial sst2A cells, identified as neuroendocrine, gastrin-producing cells, were found in large numbers in the antrum and the duodenum, but not in the gastric corpus.

REFERENCE
 AUTHORS
 TITLE
 JOURNAL
 PUBMED
 REMARK

8 (residues 1 to 369)
 Park,C., Yang,I., Woo,J., Kim,S., Kim,J., Kim,Y., Sohn,S., Kim,E., Lee,M., Park,H., Jung,J. and Park,S.
 Somatostatin (SRIF) receptor subtype 2 and 5 gene expression in growth hormone-secreting pituitary adenomas: the relationship with endogenous srif activity and response to octreotide
 Endocr. J. 51 (2), 227-236 (2004)
15118275
 REMARK GeneRIF: The degree (or level) of sst2 and sst5 expression is critical for the ultimate GH response of somatotropomas to endogenous SRIF tone and exogenous SRIF analogue therapy.

REFERENCE
 AUTHORS
 TITLE
 JOURNAL
 PUBMED
 REMARK

9 (residues 1 to 369)
 Kumar,M., Liu,Z.R., Thapa,L., Chang,Q., Wang,D.Y. and Qin,R.Y.
 Antiangiogenic effect of somatostatin receptor subtype 2 on pancreatic cancer cell line: Inhibition of vascular endothelial growth factor and matrix metalloproteinase-2 expression in vitro
 World J. Gastroenterol. 10 (3), 393-399 (2004)
14760765
 REMARK GeneRIF: Expression of reintroduced human SSTR2 gene exerts its antiangiogenic effects by down-regulating expressions of factors

involved in tumor angiogenesis and metastasis, suggesting SSTR2 gene transfer as new strategy of gene therapy for pancreatic cancer.

REFERENCE 10 (residues 1 to 369)
 AUTHORS Qin,R.Y., Fang,R.L., Gupta,M.K., Liu,Z.R., Wang,D.Y., Chang,Q. and Chen,Y.B.
 TITLE Alteration of somatostatin receptor subtype 2 gene expression in pancreatic tumor angiogenesis
 JOURNAL World J. Gastroenterol. 10 (1), 132-135 (2004)
 PUBMED [14695784](#)
 REMARK GeneRIF: SST2R gene together with p53 and ras genes may participate in pancreatic cancerous angiogenesis.

REFERENCE 11 (residues 1 to 369)
 AUTHORS Liu,Q., Reubi,J.C., Wang,Y., Knoll,B.J. and Schonbrunn,A.
 TITLE In vivo phosphorylation of the somatostatin 2A receptor in human tumors
 JOURNAL J. Clin. Endocrinol. Metab. 88 (12), 6073-6079 (2003)
 PUBMED [14671213](#)
 REMARK GeneRIF: The receptor from somatostatinoma was completely phosphorylated. Only unphosphorylated sst2A was present in human tumors not exposed to autocrine stimulation.

REFERENCE 12 (residues 1 to 369)
 AUTHORS Bertherat,J., Tenenbaum,F., Perlemoine,K., Videau,C., Alberini,J.L., Richard,B., Dousset,B., Bertagna,X. and Epelbaum,J.
 TITLE Somatostatin receptors 2 and 5 are the major somatostatin receptors in insulinomas: an in vivo and in vitro study
 JOURNAL J. Clin. Endocrinol. Metab. 88 (11), 5353-5360 (2003)
 PUBMED [14602773](#)
 REMARK GeneRIF: Sst2 and sst5 were expressed in 70%, sst1 in 50%, and sst3 and sst4 subtypes only in 15-20% of insulinomas

REFERENCE 13 (residues 1 to 369)
 AUTHORS Brunicardi,F.C., Atiya,A., Moldovan,S., Lee,T.C., Fagan,S.P., Kleinman,R.M., Adrian,T.E., Coy,D.H., Walsh,J.H. and Fisher,W.E.
 TITLE Activation of somatostatin receptor subtype 2 inhibits insulin secretion in the isolated perfused human pancreas
 JOURNAL Pancreas 27 (4), E84-E89 (2003)
 PUBMED [14576502](#)
 REMARK GeneRIF: Activation of SSTR 2 by SSTR 2 agonist significantly suppressed insulin secretion.

REFERENCE 14 (residues 1 to 369)
 AUTHORS Celinski,S.A., Fisher,W.E., Amaya,F., Wu,Y.Q., Yao,Q., Youker,K.A. and Li,M.
 TITLE Somatostatin receptor gene transfer inhibits established pancreatic cancer xenografts
 JOURNAL J. Surg. Res. 115 (1), 41-47 (2003)
 PUBMED [14572771](#)
 REMARK GeneRIF: Expression of somatostatin receptor 2 by human pancreatic cancer causes significant slowing of tumor growth by a mechanism independent of exogenous somatostatin

REFERENCE 15 (residues 1 to 369)
 AUTHORS Dalm,V.A., van Hagen,P.M., van Koetsveld,P.M., Achilefu,S., Houtsmuller,A.B., Pols,D.H., van der Lely,A.J., Lamberts,S.W. and Hofland,L.J.
 TITLE Expression of somatostatin, cortistatin, and somatostatin receptors in human monocytes, macrophages, and dendritic cells
 JOURNAL Am. J. Physiol. Endocrinol. Metab. 285 (2), E344-E353 (2003)
 PUBMED [12684217](#)
 REMARK GeneRIF: study demonstrates for the first time a selective and inducible expression of the recently discovered cortistatin, as well as somatostatin receptor 2, in human monocyte-derived cells

REFERENCE 16 (residues 1 to 369)
 AUTHORS Hashemi,S.H., Li,J.Y., Ahlman,H. and Dahlstrom,A.
 TITLE SSR2(a) receptor expression and adrenergic/cholinergic characteristics in differentiated SH-SY5Y cells
 JOURNAL Neurochem. Res. 28 (3-4), 449-460 (2003)
 PUBMED [12675130](#)
 REMARK GeneRIF: Presence and intracellular localization of the spliced variant SSR2(a) and its endogenous ligand SS in the cultured human neuroblastoma (NB) cell line, SH-SY5Y.
 REFERENCE 17 (residues 1 to 369)
 AUTHORS Guillermet,J., Saint-Laurent,N., Rochaix,P., Cuvillier,O., Levade,T., Schally,A.V., Pradayrol,L., Buscail,L., Susini,C. and Bousquet,C.
 TITLE Somatostatin receptor subtype 2 sensitizes human pancreatic cancer cells to death ligand-induced apoptosis
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 100 (1), 155-160 (2003)
 PUBMED [12490654](#)
 REMARK GeneRIF: sensitizes human pancreatic cancer cells to death ligand-induced apoptosis
 REFERENCE 18 (residues 1 to 369)
 AUTHORS Pasquali,D., Notaro,A., Bonavolonta',G., Vassallo,P., Bellastella,A. and Sinisi,A.A.
 TITLE Somatostatin receptor genes are expressed in lymphocytes from retroorbital tissues in Graves' disease
 JOURNAL J. Clin. Endocrinol. Metab. 87 (11), 5125-5129 (2002)
 PUBMED [12414882](#)
 REMARK GeneRIF: somatostatin receptor transcripts were found in lymphocytes both from Graves' ophthalmopathy retroorbital tissues and blood samples, with levels of expression of SST1, -2, and -4 mRNA higher than those of the SST3 and -5 transcripts
 REFERENCE 19 (residues 1 to 369)
 AUTHORS Hansson,J., Bjartell,A., Gadaleanu,V., Dizeyi,N. and Abrahamsson,P.A.
 TITLE Expression of somatostatin receptor subtypes 2 and 4 in human benign prostatic hyperplasia and prostatic cancer
 JOURNAL Prostate 53 (1), 50-59 (2002)
 PUBMED [12210479](#)
 REMARK GeneRIF: expression of SSTR2 transcripts up-regulated in prostatic carcinoma cells; SSTR2 agonists may have role in treatment of prostate cancer
 REFERENCE 20 (residues 1 to 369)
 AUTHORS Dizeyi,N., Konrad,L., Bjartell,A., Wu,H., Gadaleanu,V., Hansson,J., Helboe,L. and Abrahamsson,P.A.
 TITLE Localization and mRNA expression of somatostatin receptor subtypes in human prostatic tissue and prostate cancer cell lines
 JOURNAL Urol. Oncol. 7 (3), 91-98 (2002)
 PUBMED [12474541](#)
 REMARK GeneRIF: localization and expression in human prostatic tissue and prostate cancer cell lines
 REFERENCE 21 (residues 1 to 369)
 AUTHORS Green,V.L., Richmond,I., Maguiness,S., Robinson,J., Helboe,L., Adams,I.P., Drummond,N.S. and Atkin,S.L.
 TITLE Somatostatin receptor 2 expression in the human endometrium through the menstrual cycle
 JOURNAL Clin. Endocrinol. (Oxf) 56 (5), 609-614 (2002)
 PUBMED [12030911](#)
 REFERENCE 22 (residues 1 to 369)
 AUTHORS Papotti,M., Bongiovanni,M., Volante,M., Allia,E., Landolfi,S., Helboe,L., Schindler,M., Cole,S.L. and Bussolati,G.
 TITLE Expression of somatostatin receptor types 1-5 in 81 cases of

gastrointestinal and pancreatic endocrine tumors. A correlative immunohistochemical and reverse-transcriptase polymerase chain reaction analysis
JOURNAL Virchows Arch. 440 (5), 461-475 (2002)
PUBMED [12021920](#)
REMARK GeneRIF: SSTRs 1-5 are heterogeneously expressed in gastroenteropancreatic endocrine tumors
REFERENCE 23 (residues 1 to 369)
AUTHORS Casini Raggi,C., Calabro,A., Renzi,D., Briganti,V., Cianchi,F., Messerini,L., Valanzano,R., Cameron Smith,M., Cortesini,C., Tonelli,F., Serio,M., Maggi,M. and Orlando,C.
TITLE Quantitative evaluation of somatostatin receptor subtype 2 expression in sporadic colorectal tumor and in the corresponding normal mucosa
JOURNAL Clin. Cancer Res. 8 (2), 419-427 (2002)
PUBMED [11839658](#)
REMARK GeneRIF: Quantitative evaluation of somatostatin receptor subtype 2 expression in sporadic colorectal tumor and in the corresponding normal mucosa
REFERENCE 24 (residues 1 to 369)
AUTHORS Oomen,S.P., van Hennik,P.B., Antonissen,C., Lichtenauer-Kaligis,E.G., Hofland,L.J., Lamberts,S.W., Lowenberg,B. and Touw,I.P.
TITLE Somatostatin is a selective chemoattractant for primitive (CD34(+)) hematopoietic progenitor cells
JOURNAL Exp. Hematol. 30 (2), 116-125 (2002)
PUBMED [11823046](#)
REFERENCE 25 (residues 1 to 369)
AUTHORS Pasquali,D., Notaro,A., Esposito,D., Vassallo,P., Bonavolonta,G., Bellastella,A. and Sinisi,A.A.
TITLE [Somatostatin receptor genes expression and effects of octreotide on orbital fibroblasts from Graves' ophthalmopathy]
JOURNAL Minerva Endocrinol. 26 (3), 175-179 (2001)
PUBMED [11753241](#)
REMARK GeneRIF: SSTR transcripts are expressed and functional in retroorbital fibroblasts. SSTR1 is expressed in Grave's disease and octreotide inhibits retroorbital cell growth, explaining the SRIH therapeutic effect.
REFERENCE 26 (residues 1 to 369)
AUTHORS Klisovic,D.D., O'Dorisio,M.S., Katz,S.E., Sall,J.W., Balster,D., O'Dorisio,T.M., Craig,E. and Lubow,M.
TITLE Somatostatin receptor gene expression in human ocular tissues: RT-PCR and immunohistochemical study
JOURNAL Invest. Ophthalmol. Vis. Sci. 42 (10), 2193-2201 (2001)
PUBMED [11527930](#)
REFERENCE 27 (residues 1 to 369)
AUTHORS Talme,T., Ivanoff,J., Hagglund,M., Van Neerven,R.J., Ivanoff,A. and Sundqvist,K.G.
TITLE Somatostatin receptor (SSTR) expression and function in normal and leukaemic T-cells. Evidence for selective effects on adhesion to extracellular matrix components via SSTR2 and/or 3
JOURNAL Clin. Exp. Immunol. 125 (1), 71-79 (2001)
PUBMED [11472428](#)
REFERENCE 28 (residues 1 to 369)
AUTHORS Zatelli,M.C., Tagliati,F., Taylor,J.E., Rossi,R., Culler,M.D. and degli Uberti,E.C.
TITLE Somatostatin receptor subtypes 2 and 5 differentially affect proliferation in vitro of the human medullary thyroid carcinoma cell line tt
JOURNAL J. Clin. Endocrinol. Metab. 86 (5), 2161-2169 (2001)

PUBMED 11344221
 REFERENCE 29 (residues 1 to 369)
 AUTHORS Omen,S.P., Ward,A.C., Hofland,L.J., Lamberts,S.W., Lowenberg,B. and Touw,I.P.
 TITLE Somatostatin modulates G-CSF-induced but not interleukin-3-induced proliferative responses in myeloid 32D cells via activation of somatostatin receptor subtype 2
 JOURNAL Hematol. J. 2 (5), 322-329 (2001)
 PUBMED 11920268
 REMARK GeneRIF: Somatostatin modulates G-CSF-induced but not interleukin-3-induced proliferative responses in myeloid 32D cells via activation of somatostatin receptor subtype 2.
 REFERENCE 30 (residues 1 to 369)
 AUTHORS Zitzer,H., Honck,H.H., Bachner,D., Richter,D. and Kreienkamp,H.J.
 TITLE Somatostatin receptor interacting protein defines a novel family of multidomain proteins present in human and rodent brain
 JOURNAL J. Biol. Chem. 274 (46), 32997-33001 (1999)
 PUBMED 10551867
 REFERENCE 31 (residues 1 to 369)
 AUTHORS Zitzer,H., Richter,D. and Kreienkamp,H.J.
 TITLE Agonist-dependent interaction of the rat somatostatin receptor subtype 2 with cortactin-binding protein 1
 JOURNAL J. Biol. Chem. 274 (26), 18153-18156 (1999)
 PUBMED 10373412
 REFERENCE 32 (residues 1 to 369)
 AUTHORS Kumar,U., Sasi,R., Suresh,S., Patel,A., Thangaraju,M., Metrakos,P., Patel,S.C. and Patel,Y.C.
 TITLE Subtype-selective expression of the five somatostatin receptors (hSSTR1-5) in human pancreatic islet cells: a quantitative double-label immunohistochemical analysis
 JOURNAL Diabetes 48 (1), 77-85 (1999)
 PUBMED 9892225
 REFERENCE 33 (residues 1 to 369)
 AUTHORS Sharma,K., Patel,Y.C. and Srikant,C.B.
 TITLE C-terminal region of human somatostatin receptor 5 is required for induction of Rb and G1 cell cycle arrest
 JOURNAL Mol. Endocrinol. 13 (1), 82-90 (1999)
 PUBMED 9892014
 REFERENCE 34 (residues 1 to 369)
 AUTHORS Tsutsumi,A., Takano,H., Ichikawa,K., Kobayashi,S. and Koike,T.
 TITLE Expression of somatostatin receptor subtype 2 mRNA in human lymphoid cells
 JOURNAL Cell. Immunol. 181 (1), 44-49 (1997)
 PUBMED 9344495
 REFERENCE 35 (residues 1 to 369)
 AUTHORS Lopez,F., Esteve,J.P., Buscail,L., Delesque,N., Saint-Laurent,N., Theveniau,M., Nahmias,C., Vaysse,N. and Susini,C.
 TITLE The tyrosine phosphatase SHP-1 associates with the sst2 somatostatin receptor and is an essential component of sst2-mediated inhibitory growth signaling
 JOURNAL J. Biol. Chem. 272 (39), 24448-24454 (1997)
 PUBMED 9305905
 REFERENCE 36 (residues 1 to 369)
 AUTHORS Jais,P., Terris,B., Ruszniewski,P., LeRomancer,M., Reyl-Desmars,F., Vissuzaine,C., Cadiot,G., Mignon,M. and Lewin,M.J.
 TITLE Somatostatin receptor subtype gene expression in human endocrine gastroentero-pancreatic tumours
 JOURNAL Eur. J. Clin. Invest. 27 (8), 639-644 (1997)
 PUBMED 9279525
 REFERENCE 37 (residues 1 to 369)

AUTHORS Fukusumi,S., Kitada,C., Takekawa,S., Kizawa,H., Sakamoto,J., Miyamoto,M., Hinuma,S., Kitano,K. and Fujino,M.
TITLE Identification and characterization of a novel human cortistatin-like peptide
JOURNAL Biochem. Biophys. Res. Commun. 232 (1), 157-163 (1997)
PUBMED 9125122
REFERENCE 38 (residues 1 to 369)
AUTHORS Reubi,J.C., Waser,B., Schaer,J.C. and Markwalder,R.
TITLE Somatostatin receptors in human prostate and prostate cancer
JOURNAL J. Clin. Endocrinol. Metab. 80 (9), 2806-2814 (1995)
PUBMED 7673428
REFERENCE 39 (residues 1 to 369)
AUTHORS Kagimoto,S., Yamada,Y., Kubota,A., Someya,Y., Ihara,Y., Yasuda,K., Kozasa,T., Imura,H., Seino,S. and Seino,Y.
TITLE Human somatostatin receptor, SSTR2, is coupled to adenylyl cyclase in the presence of Gi alpha 1 protein
JOURNAL Biochem. Biophys. Res. Commun. 202 (2), 1188-1195 (1994)
PUBMED 7914078
REFERENCE 40 (residues 1 to 369)
AUTHORS Fujita,T., Yamaji,Y., Sato,M., Murao,K. and Takahara,J.
TITLE Gene expression of somatostatin receptor subtypes, SSTR1 and SSTR2, in human lung cancer cell lines
JOURNAL Life Sci. 55 (23), 1797-1806 (1994)
PUBMED 7968260
REFERENCE 41 (residues 1 to 369)
AUTHORS Yamada,Y., Stoffel,M., Espinosa,R. III, Xiang,K.S., Seino,M., Seino,S., Le Beau,M.M. and Bell,G.I.
TITLE Human somatostatin receptor genes: localization to human chromosomes 14, 17, and 22 and identification of simple tandem repeat polymorphisms
JOURNAL Genomics 15 (2), 449-452 (1993)
PUBMED 8449518
REFERENCE 42 (residues 1 to 369)
AUTHORS Yamada,Y., Post,S.R., Wang,K., Tager,H.S., Bell,G.I. and Seino,S.
TITLE Cloning and functional characterization of a family of human and mouse somatostatin receptors expressed in brain, gastrointestinal tract, and kidney
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 89 (1), 251-255 (1992)
PUBMED 1346068
COMMENT REVIEWED REFSEQ: This record has been curated by NCBI staff. The reference sequence was derived from BC019610.1 and BC000256.1.

Summary: Somatostatin acts at many sites to inhibit the release of many hormones and other secretory proteins. The biologic effects of somatostatin are probably mediated by a family of G protein-coupled receptors that are expressed in a tissue-specific manner. SSTR2 is a member of the superfamily of receptors having seven transmembrane segments and is expressed in highest levels in cerebrum and kidney.

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